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(71) Applicant(s)

G & C Home & Leisure Supplies Limited
(Incorporated in the United Kingdom)
Cobham Road, Pershore, Worcestershire WR10 2DL,
United Kingdom

(72) Inventor(s)

Donald Olaf Cheetham

(74) Agent and/or Address for Service

Wynne-Jones, Lainé & James
22 Rodney Road, CHELTENHAM, Gloucestershire,
GL50 1JJ, United Kingdom

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(56) Documents Cited

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WPI ABSTRACT ACC NO. 98-448545 & DE29801415U

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(54) Abstract Title

Play station with adjustable seat, desk and footrest.

(57) A play station has a base frame 1, a seat 2, a sub-frame 3, a desk 4 and a foot rest 5. The desk 4 is carried with an adjustable tilt on the sub-frame 3, which pivots on a transverse axis in front of the seat 2 to present the desk 4 in a convenient position for the user. The base frame 1 extends forward from the base of the seat and the foot rest 5 locates on it. Both the foot rest 5 and the seat 2 are adjustable in the fore-and-aft direction relative to the base frame 1. The base frame 1 and the sub-frame 3 may be foldable back over the seat 2, which itself can be foldable, for stowage.

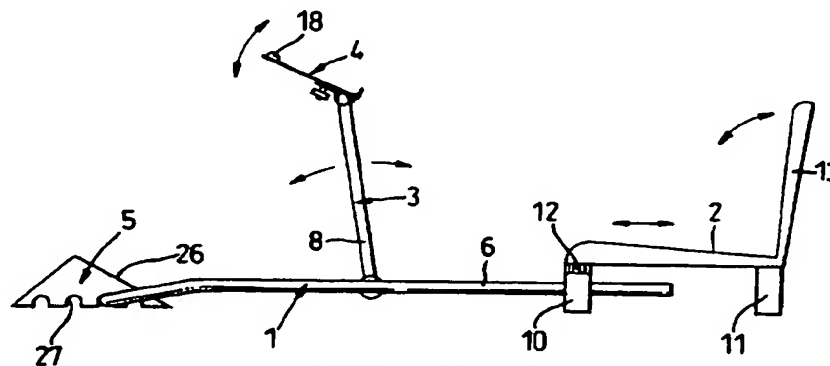


Fig. 1

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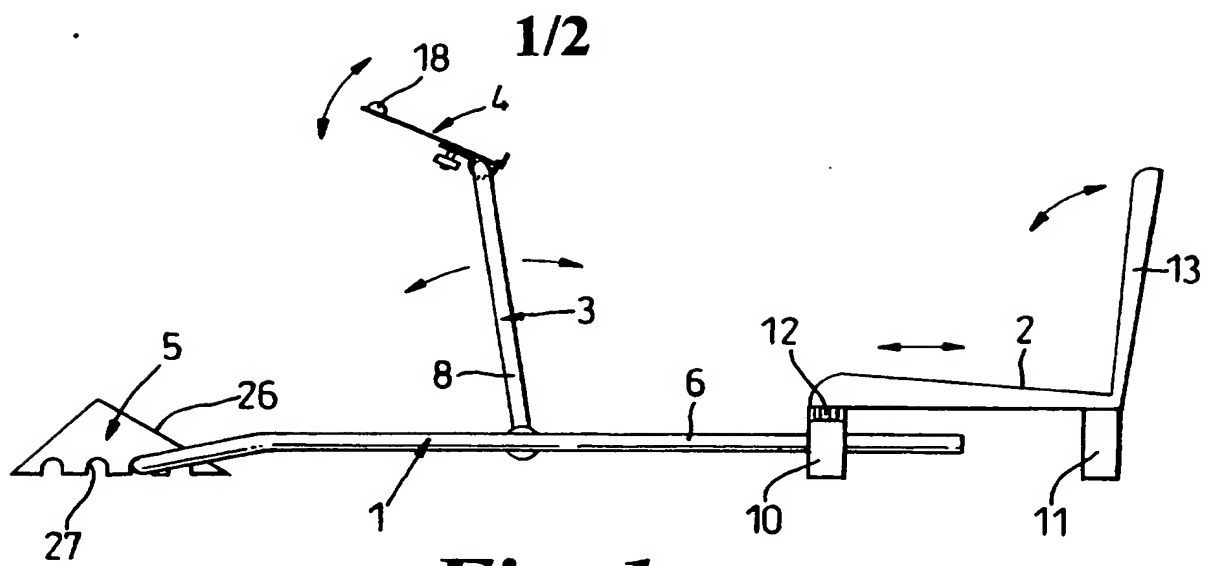


Fig. 1

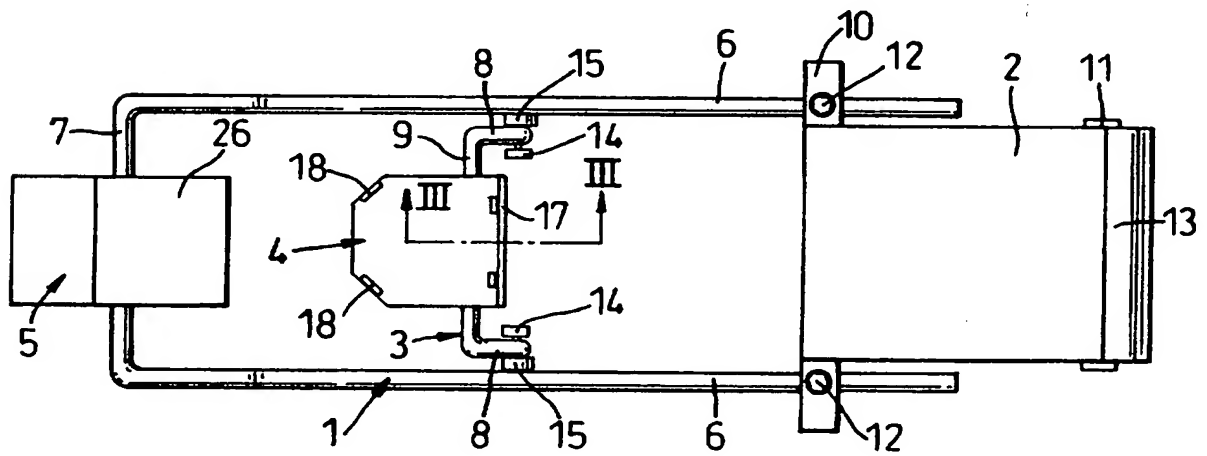


Fig. 2

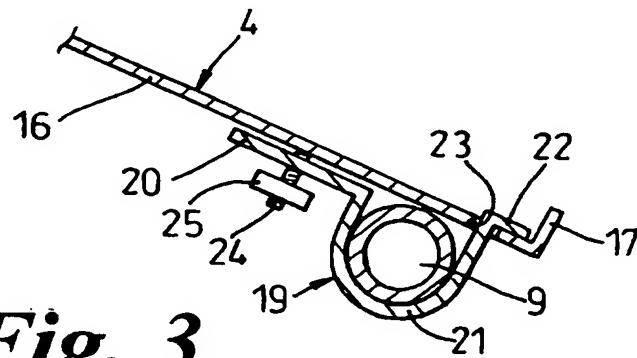


Fig. 3

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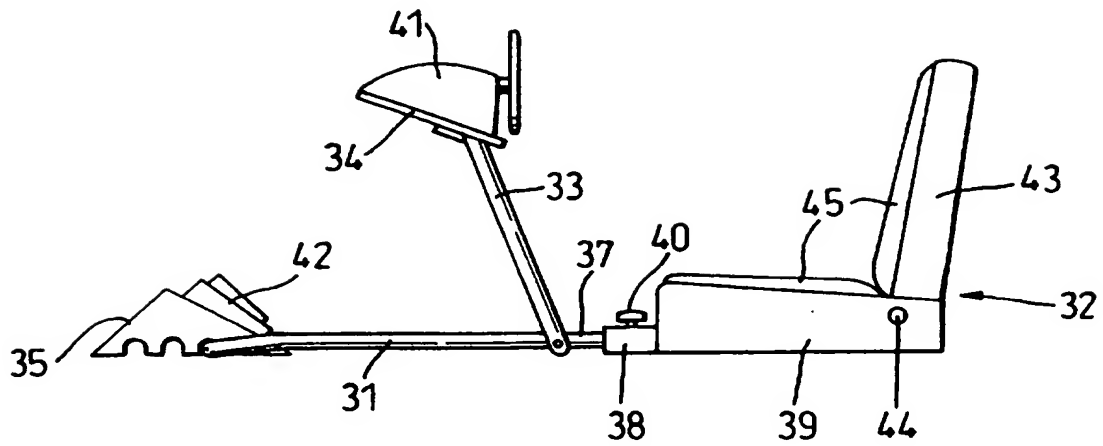


Fig. 4

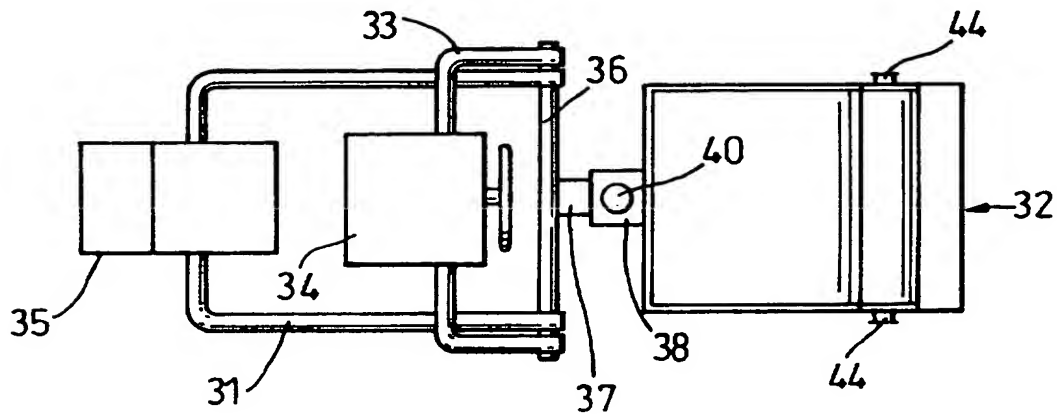


Fig. 5

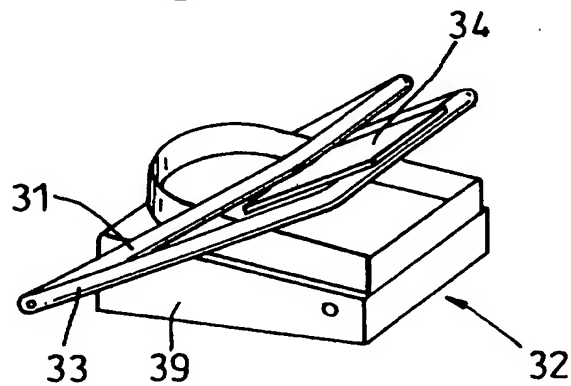


Fig. 6

Improvements relating to play stations

This invention relates to play stations.

Video games where the player sits at a console and manipulates with hand and foot controls the images appearing on a television screen in front of him are very popular. Consoles and pedal units are available to use in conjunction with existing television sets. However, just putting the console on a table in front of the set, with the pedal unit on the floor underneath, and sitting on a chair drawn up to the table, seldom works satisfactorily. Not only do players vary substantially in size, but many games incite the player to fairly violent action (for example to avoid a car crash on the screen), and this results in the console and/or pedal unit being dislodged.

It is the aim of this invention to provide a play station which can firmly locate a console and pedal unit and yet have them adjustable, along with the players seat, to suit the player's size.

According to the present invention there is provided a play station comprising a base frame, a seat connected to the rear of the base frame, a foot rest at the forward end of the base frame, a sub-frame pivoted to the frame/seat assembly about a transverse axis intermediate the seat and foot rest and settable in a selected generally upright attitude, and a desk carried by the top of the sub-frame, tiltable about a transverse axis and settable in a selected attitude, the erect sub-frame straddling a user in the seat with feet on the foot rest to present the desk over the

users lap.

In use, after suitable adjustment of the components, the player sits on the seat with his legs through the sub-frame and his feet resting comfortably on pedals on a unit
5 on the footrest. His hands control a console placed on the desk at a suitable height and angle directly in front of him.

The base frame may be a simple U-shaped member, of metal tube for example, its arms extending rearwardly from
10 the web.

The foot rest is preferably separable from the base frame and has a notched underside to engage over the transverse web of the base frame and bear on the floor. Generally, there will be an array of notches in the under-
15 side of the footrest enabling that to be adjusted stepwise towards or away from the seat. The foot rest can be made to be stowable within the base of the seat when not in use.

The sub-frame may also be a simple U-shaped member pivoted at the ends of its arms, the desk being mounted on
20 its transverse web. The sub-frame may be hingeable back over the seat when not in use.

Conveniently, the seat is foldable, with a back rest that can hinge down over its base. The seat will also generally be adjustable relative to the base frame in the
25 fore-and-aft direction.

The rear end of the base frame may conveniently be pivoted to the front of the seat about a transverse axis, enabling that frame to be hinged up and over the seat when

not in use. The base frame and sub-frame can pivot about a common axis.

For a better understanding of the invention, one embodiment will now be described, by way of example, with
5 reference to the accompanying drawings, in which:

Figure 1 is a side view of a play station,

Figure 2 is a plan view of the play station,

Figure 3 is a cross section, to an enlarged scale on
the line III-III of Figure 2,

10 Figure 4 is a side view of another play station,

Figure 5 is a plan view of the play station of Figure
4, and

Figure 6 is a perspective view from above of the play
station of Figure 4 when folded and out of use.

15 The main components of the play station of Figures 1 to
3 are a base frame 1, a seat 2, a sub-frame 3, a desk 4 and
a foot rest 5. The base frame 1 is U-shaped, its arms 6
pointing to the rear, where the seat 2 is fitted, and its
transverse web 7 at the front providing a location for the
20 footrest. The sub-frame 3 is also U-shaped, but narrower
and shorter, the U being inverted and the ends of its arms
8 being pivoted to respective arms 6 at about their mid-
points, but clampable in a set position. The desk 4 is
carried by the transverse web 9 of the sub-frame 3 and its
25 tilt can be varied.

In more detail, the seat 2 has a base structure
comprising two transverse beams 10 and 11. The forward beam
has holes at its ends to receive the arms 6, and screw

clamps 12 to tighten down onto the arms when the seat is adjusted correctly in the fore and aft direction. The arms 6 are bent towards their forward ends so that with the web 7 on the floor, about three quarters of the length of the arms will run horizontally above the floor. The rear beam 11 is shorter and if the seat 2 is required to move forward from the position shown, the beam 11 will go between the arms 6. The actual seat itself has a folding backrest 13 and conveniently it will be two moulded plastic shells, although it could be padded or upholstered.

The sub-frame 3 has the ends of its arms 8 transversely drilled in the plane of the U to receive screw clamps 14 which engage in bosses 15 welded to the insides of the arms 6. When the clamps 14 are released, the sub-frame can pivot about the common axis of the screw-threaded shanks of the clamps 14.

The desk 4 has a flat plate 16 with a turned up flange 17 along its lower edge and two lugs 18 upstanding from the periphery near the upper edge. Another plate 19, formed in cross-section like a question mark, has its flat portion 20 against the underside of the plate 16 and its curved portion 21 embracing the web 9. Two lugs 22, turned away from the free edge of the portion 21 are inserted through slots 23 in the plate 16 near the flange 17 and lie against the upper surface of the plate. A screw threaded stud 24 is welded to the underside of the plate 16 and passes through the portion 20 to receive a clamping nut 25. When this is loosened, the desk can be tilted, but when tightened the portion 21 clamps

around the web 9 and holds the desk at the selected angle.

The footrest 5 has a sloping surface 26 facing up and to the rear, and triangular sides with notches 27 along the lower horizontal edges. These are shaped and sized to fit
5 closely over the web 7 while those lower edges rest on the floor. Fore and aft adjustment is stepwise, the footrest being picked up and replaced to use the most suitable notches 27.

For use, the seat 2, the footrest 5 and the desk 4 are
10 set at the most suitable positions for the size of the player. A pedal unit (not shown) is placed on the surface 26 and a manual control unit (also not shown) is placed on the desk 4, the whole assembly facing the screen on which the action is to appear.

15 When out of use, the sub-frame 3 and the desk 4 can be folded flat with the base frame 1, and the seat 2 can be removed and folded up. These components, and the footrest, can then all be stowed away in a "flat-pack".

Another play station is shown in Figures 4, 5 and 6,
20 and its main components are a base frame 31, a seat 32, a sub-frame 33, a desk 34 and a foot rest 35. The base frame 31 is again U-shaped in plan but its arms do not extend back as far as the seat 32. Their ends are pivotally engaged with the cross bar 36 of a T-shaped member whose stem 37
25 enters a socket 38 projecting centrally at the front of the base 39 of the seat 32. The stem 37 can be adjusted in the fore-and-aft direction and clamped by a screw knob 40.

The sub-frame 33 and desk 34 are generally similar to

the components 3 and 4 described previously, except that here the sub-frame is wider than the main frame. The ends of its arms are also pivoted on the cross bar 36. There is sufficient friction between the ends of the arms of the frames 31 and 33 that, while they can be mutually adjusted, they require considerable force to make that adjustment. This friction will be factory set but means will be provided for the user to re-tighten if the parts become loose. Figure 4 shows the desk fitted with a steering wheel unit 41. One desk may be able to accept several different units, but there may have to be a small range of desks available to cater for all the consoles and units on the market.

The foot rest 35 is similar to the foot rest 5 and co-operates with the front of the base frame 31 in the manner already described. Conveniently, it is a plastics moulding (it can be vacuum formed) and it will be designed to fit inside the base 39 of the seat when not in use. Figure 4 shows the foot rest carrying a pedal unit 42.

The seat 32 has a back rest 43 that can swing between the raised position of Figure 4 and the lowered position of Figure 6, where it overlies the base 39. It is of dished form, the hollow side facing rearwardly. The angle of the back rest when raised can be adjusted and fixed by screw clamps 44 at each side, on the pivot axis. Both the base 39 and back rest 43 are upholstered by cushioning 45.

The in use position is shown in Figure 4. When out of use, the foot rest 35 is removed, the clamps 44 are released, the back rest 43 is folded forwards, and the sub-

frame 33 and base frame 31 are swung back to overlie the back rest 43. The desk 34 will also be loosened during this operation so that its forward end can swing down into the hollow of the back rest 43 and be trapped below the base frame 31, as shown in Figure 6. The foot rest 35 is clipped into the base 39 of the seat. The play station is thus in a compact package for storage.

These operations are simply reversed to get the play station back into use. It will be appreciated that the seat can be adjusted as necessary fore-and-aft by use of the connection 37, 38 and the clamping knob 40, and the foot rest 38 can also be set in the most comfortable position using the notches in its base.

CLAIMS

1. A play station comprising a base frame, a seat connected to the rear of the base frame, a foot rest at the forward end of the base frame, a sub-frame pivoted to the frame/seat assembly about a transverse axis intermediate the seat and foot rest and settable in a selected generally upright attitude, and a desk carried by the top of the sub-frame, tiltable about a transverse axis and settable in a selected attitude, the erect sub-frame straddling a user in the seat with feet on the foot rest to present the desk over the user's lap.
2. A play station as claimed in Claim 1, wherein the base frame is a U-shaped member, its arms extending rearwardly from the web.
3. A play station as claimed in Claim 2, wherein the foot rest is separable from the base frame and has a notched underside to engage over the transverse web of the base frame and bear on the floor.
4. A play station as claimed in Claim 3, wherein there is an array of notches in the underside of the footrest enabling that to be adjusted stepwise towards or away from the seat.
5. A play station as claimed in Claim 3 or 4, wherein the foot rest is stowable within the base of the seat when not in use.
6. A play station as claimed in any preceding claim, wherein the sub-frame is a U-shaped member pivoted at the ends of its arms, the desk being mounted on its transverse

web.

7. A play station as claimed in Claim 6, wherein the sub-frame is hingeable back over the seat when not in use.

8. A play station as claimed in any preceding claim,
5 wherein the seat is foldable, with a back rest that can hinge down over its base.

9. A play station as claimed in any preceding claim, wherein the seat is adjustable relative to the base frame in the fore-and-aft direction.

10 10. A play station as claimed in any preceding claim, wherein the rear end of the base frame is pivoted to the front of the seat about a transverse axis, enabling that frame to be hinged up and over the seat when not in use.

11. A play station as claimed in Claim 10, wherein the base
15 frame and sub-frame pivot about a common axis.

12. A play station substantially as hereinbefore described with reference to figures 1 to 3 or Figures 4 to 6 of the accompanying drawings.



Application No: GB 9821245.9
Claims searched: 1-12

Examiner: Emma Leland
Date of search: 1 February 1999

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.Q): A4L (LAAL LAAQ LAAT LABB)

Int CI (Ed.6): A47B (3/14 37/00 83/00 83/02 97/00)

Other: Online : WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	GB 2028117 Mellinger - figs. 3&4	1
A	GB 1585622 Tomasi - fig. 1	1
X	US 4915450 Cooper - figs.1&2; col. 2, line 63 - col. 3, line 2	1
A	US 4134614 Fielding - figs 1&2	1
A	WPI Abstract Acc. No. 98-448545 & DE 29801415U (Klimowski) - see abstract and figures.	1

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